

From: Peterson, Lance
To: [Sheldrake, Sean](#)
Cc: [BAYUK Dana](#)
Subject: Gasco - Seepage meter data gap investigation oversight - Thursday September 7, 2017
Date: Thursday, September 7, 2017 5:45:04 PM
Attachments: [Proposed seepage meter location map Summer 2017 Sampling Memo.pdf](#)

WORK ACTIVITIES CONDUCTED

Jason Silvertooth from CDM Smith was present to conduct safety and seepage meter data download and retrieval oversight at the Gasco project area from 09:55 to 14:25 hours on Thursday, September 07, 2017. The purpose of the site visit was to perform health and safety oversight of diving activities and in-water work, and monitor work progress. The objective of the work is to deploy seepage meters to evaluate groundwater seepage into the Willamette River adjacent to the Gasco site. The work was performed by NW Natural's contractors Anchor QEA, Coastal Monitoring Associates (CMA), and Research Support Services (RSS). The weather was smoky (due to wildfires in the region), with a high of approximately 80 degrees Fahrenheit.

At 09:55 hrs., the CDM Smith representative arrives at the Cathedral Park boat ramp, which is the designated meeting point for the project. Anchor QEA, CMA, and RSS are preparing the boats for the day's work. A new representative from Anchor QEA (Holly Samaha) is present for the remainder of work activities, and is discussing work progress with CMA and RSS.

At 10:00 hrs., the safety meeting is conducted by Jason Silvertooth (CDM Smith) and Holly Samaha (Anchor QEA). Also present at the meeting are Bart Chadwick (CMA), Chris Smith (CMA), Alan Sims (CMA), Eric Parker (RSS), Dale Dickenson (RSS), Viktor Gazarian (RSS), and Andrew Muth (RSS). The following topics are discussed during the meeting:

1. The procedure for retrieving and decontaminating the seepage meters is discussed. Decontamination consists of rinsing any visible sediment with site water, then rinsing again with potable water to ensure all sediment is removed. During rinsing, the equipment will be inspected visually for potential contaminated sediment or sheen. CMA will perform the rinsing, and will wear full rain gear, hardhats, and safety glasses when hoisting the meter and rinsing. All other personnel will stay clear of the decontamination zone to prevent contact with spray, and the boat will be reoriented if necessary based on wind speed and direction.
2. Air quality has improved, but smoky conditions persist from forest fires in the region. Workers will continue to limit exertion to prevent respiratory problems, and monitor each other for signs of respiratory issues. Particulate air filters (NIOSH N95) are provided for anyone who is experiencing respiratory discomfort or wants to take preventative action.
3. Diver communications are discussed. If communication is lost between the diver and the boat, the diver will stop working and return to surface.
4. Eric Parker provides a boat orientation for Holly Samaha, including the location of safety equipment, decontamination zones, and boat-specific hazards including potential trip hazards and pinch points.

At 10:15 hrs., arrive at the Gasco area. The A-frame is in place in preparation of raising the dive flags and the anchors are set to get into the correct location.

At 11:00 hrs., the boat is in place at location GRD-01. Eric Parker (RSS) calls the U.S. Coast Guard and Willamette River traffic to notify them of diving operations. The dive flag is raised to position at the top of the A-frame.

At 11:17 hrs., the process of downloading data and collecting the seepage meter at GRD-01 begins. Communication checks are performed before the diver enters the water.

At 12:05 hrs., the data downloads are complete and the seepage meter has been retrieved and decontaminated at GRD-01. During decontamination procedures, no visual contamination or sheen was observed on the diver's suit or the seepage meter.

At 13:00 hrs., the boat is in place at location GRD-03, and the process of downloading data and collecting the seepage meter begins.

At 14:15 hrs., data download is complete and the seepage meter has been retrieved and decontaminated at GRD-03. During decontamination procedures, no visual contamination or sheen was observed on the diver's suit or the seepage meter. The meter was initially unable to establish communication with the computer, so the diver and CMA went through troubleshooting steps to establish communication. The battery apparently died after approximately 39.5 hours of operation. The Anchor QEA field representative (with input from the project manager) decided that 39.5 hours is sufficient for that location and the meter was retrieved. After retrieving the meter, the diver flag was lowered and Eric Parker notifies the U.S. Coast Guard and Willamette River traffic that dive operations are complete.

At 14:25 hrs., CDM Smith and Anchor QEA representatives are off the boat and demobilize from the site. All site operations are complete for the day.

HEALTH AND SAFETY ISSUES

None noted.

ACTIVITIES DISCUSSED

The seepage meters are all to be deployed for three days. Seepage meters to be collected on 9/8/17 are at locations GRD-04 and GRD-02. The project team will meet at Cathedral Park at 09:00 hrs. on 9/8/17 to allow three full days of data at GRD-04. Representatives from NW Natural will remove the boom near location GRD-02 in the morning to allow boat access to that seepage meter.

PHOTOS

Refer to previous emails sent on 9/7/17 for photos of seepage meter deployment and diver activities.

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